

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2004/028921

International filing date (day/month/year)
03.09.2004

Priority date (day/month/year)
05.09.2003

International Patent Classification (IPC) or both national classification and IPC
C09D5/03, C09D163/00, C08G59/64, C09D5/08

Applicant
E.I. DUPONT DE NEMOURS AND COMPANY

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-25
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-25
Industrial applicability (IA)	Yes: Claims	1-25
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rules 43bis.1 and 70.10)

and /or

2. Non-written disclosures (Rules 43bis.1 and 70.9)

see form 210

The following relevant documents (D1-D3) are referred to in this communication:

D1: US 2004/147690 A1 (WATKINS MICHAEL J ET AL) 29 July 2004 (2004-07-29)
D2: EP-A-1 236 774 (VOMM CHEMIPHARMA S.R.L) 4 September 2002 (2002-09-04)
D3: EP-A-0 588 318 (NIPPON PAINT CO., LTD) 23 March 1994 (1994-03-23)

1. Novelty: Art. 33(2) PCT

Document D1 is an intermediate (P-) document, which is considered to be novelty-destroying only if the priority of the present application is not valid (Rule 70.10 PCT). The applicant is kindly asked to add a copy of the priority document, in order to check the validity of the priority claimed. This document D1 will be novelty-destroying in the European phase. For information's sake, D1 is examined for novelty:

Document D1 discloses in claims 18 and 19 a powder coating composition based on (a) an epoxy resin, (c) a primary aminoalcohol selected from a list and (c) a curing agent comprising dicyandiamide. Examples 3 and 5 disclose compositions having all features of claims 1-6, 9-10 and 23. These compositions are useful as powder coatings for pipe (abstract and §1). The metal substrate and the process disclosed in the examples disclose the same features as in claims 11-20 and 24.

2. Inventive step: Art. 33(3) PCT

The closest prior art is considered to be D3, which is cited by the applicant and discloses in the example 15, p.9 a composition comprising a solid epoxy resin (Epikote 1004TM), zinc borate, dicyandiamide and 2-methyl-4-phenylimidazole.

The difference between D3 and claim 1 of the present application lies in the absence in D3 of an alkanolamine.

As no direct comparative examples with D3 is disclosed in the present application, the technical objective problem is to provide an alternative powder coating composition.

D2 discloses in its example 1, p.6 §75, a powder coating composition comprising an epoxy resin and dicyandiamide as curing agent. Alkanolamines are listed in §41, col.6 and can be added as curing or flow agent, see § 43, col. 6. Concerning the range of alkanolamines, example 1 of D3 shows the addition of 4 wt % of a flow agent, which is within the range of claim 1 of the present application.

The skilled person would combine the teachings of D2 with D3 to arrive at the subject-matter of claims 1-25.

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Therefore, the subject-matter of claims 1-25 of the present application does not fulfill the requirements of Art. 33(3) PCT.

3. Industrial applicability: Art. 33(4) PCT

The subject-matter of claims 1-25 is industrially applicable.